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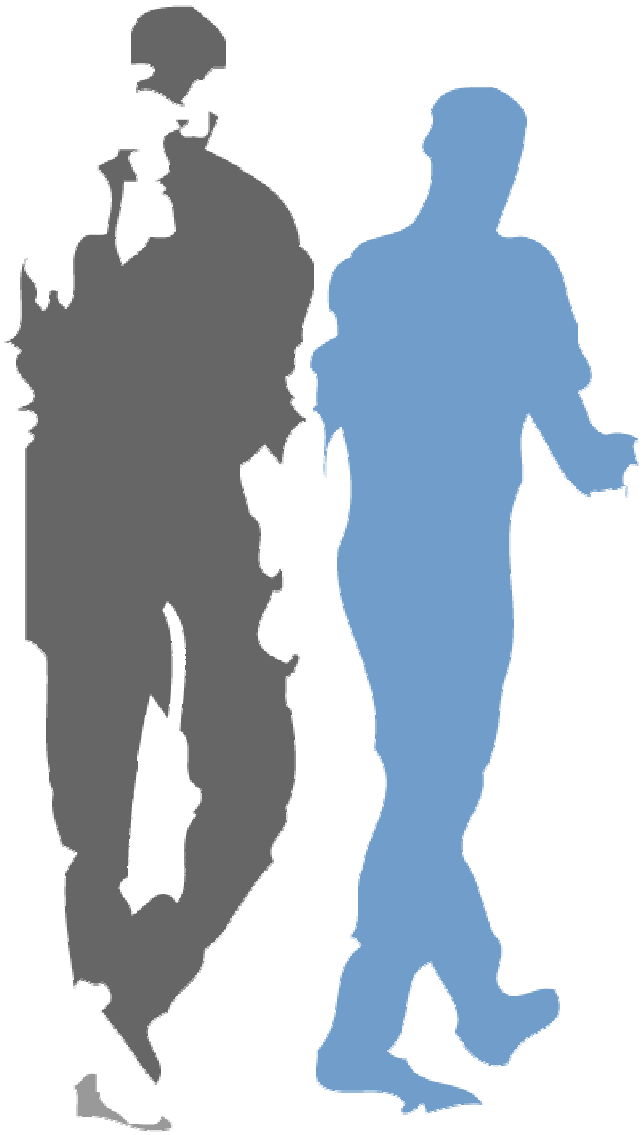
XProtect

Matrix Monitor 2.2

User's Manual



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Target Audience for this Document

This document is aimed at users of the Milestone XProtect *Matrix Monitor* application.

This document provides users with detailed descriptions of *Matrix Monitor* features. It furthermore provides a number of targeted "how-to" examples, guiding users through completing common tasks, including installation.

Milestone XProtect Enterprise surveillance system administrators requiring information about how to configure *Matrix* on the surveillance system server, or how to control Matrix Monitors from a HTML page, should refer to the *Milestone XProtect Enterprise 6.0 Administrator's Manual*.

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Introduction

Milestone XProtect Matrix is an integrated product allowing distributed viewing of video from any camera on any monitor on a network operating with Milestone XProtect Enterprise.

A computer on which Matrix-triggered images can be shown is known as a Matrix Monitor. Being able to view Matrix-triggered images requires that either a *Smart Client* (see separate manual, available from www.milestonesys.com) or the *Matrix Monitor* application is installed on the computer. This manual covers the *Matrix Monitor* application.

Example: Viewing images in the *Matrix Monitor* Application

There are two ways in which Matrix-triggered images can appear on a Matrix Monitor:

- Another user wants to share important images, and sends them from the surveillance system's *Monitor* application, from a *Smart Client*, or from a custom-made web page to the required Matrix Monitor

- The images are sent to the required Matrix Monitor automatically when a predefined event occurs; for example when a door sensor detects that a door is opened, or when the surveillance system detects motion in the images from a camera

As part of the image exchange between computers on the Milestone XProtect Enterprise/Matrix system, other computers (exactly which computers are defined as part of the Matrix configuration) are able to send commands to Matrix Monitors. The commands typically tell the Matrix Monitors to connect to, or disconnect, image feeds from a particular cameras.

Installation

Note: Read the License Terms on the Product License Sheet (enclosed with the software CD) before installing the *Matrix Monitor* application.

To install the *Matrix Monitor* application, do the following:

1. Insert the Milestone XProtect Enterprise software CD, wait for a short while, select required language, then click the *Install Milestone Matrix Monitor* link.

   Alternatively, if you are installing a version downloaded from the internet, run the file *MilestoneXProtectMatrixMonitor.exe* from the location you have saved it to.

   Tip: Depending on your security settings, you may receive one or more security warnings (*Do you want to run or save this file?*, *Do you want to run this software?*). When this is the case, click the *Run* button.

2. When the installation wizard starts, click *Next* to continue the installation.

3. Read and accept the License Agreement.

4. Specify your *User Name* and *Company Name*:

   You furthermore have the option of selecting whether the *Matrix Monitor* application should be available just for you, or for anyone using the computer. If in doubt, select *Anyone ...*

   When ready, click *Next*.

5. Follow the next few simple steps in the installation wizard until you are asked to select the setup type that best suits your needs:

- If you want a shortcut to the *Matrix Monitor* application placed on your desktop automatically, keep *Add shortcut to desktop* selected.

- If you want the *Matrix Monitor* application to run automatically each time the computer loads Windows, keep *Add Matrix Monitor to Startup group* selected.

When ready, click *Next* twice.

6. Click *Finish* on the last step to complete the installation.

Configuration

The way you access the configuration window for the *Matrix Monitor* application differs depending on whether you configure the *Matrix Monitor* application for the first time or you want to make changes to the configuration of a running *Matrix Monitor* application.

First Time Configuration

To configure the *Matrix Monitor* application for the first time, do the following:

1. Double-click the *Matrix Monitor* shortcut on your desktop:

   Alternatively, use Windows' *Start* menu, selecting *All Programs* > *Milestone XProtect Matrix Monitor* > *Milestone Matrix Monitor*.

   This will open the *Matrix Monitor Configuration* window:

2. Specify the password required for communicating with your Matrix Monitor in the *Password* and *Retype Password* fields.

   The password must match the password that has been specified for your Matrix Monitor on the surveillance system server; consult your surveillance system administrator if in doubt.

   Tip: Memorize the password; you will need it if you want to change your *Matrix Monitor* application's configuration at a later stage.

3. Specify the port number on which your Matrix Monitor will listen for commands (e.g. about connecting to a camera).

   By default, port 12345 is used. The port number must match the port number that has been specified for your Matrix Monitor on the surveillance system server; consult your

surveillance system administrator if in doubt.

4. Specify which hosts (other computers) are allowed to send commands to your Matrix Monitor.

   If commands from any host should be accepted, simply select *Allow All Hosts*.

   If only commands from particular hosts should be accepted, leave the *Allow All Hosts* box cleared, and do the following to add each required host:

   a. Specify the IP address of the host in the field below the large *Allowed Hosts* box in the right side of the window:

   Tip: To jump to the next IP address segment in the field, press SPACE on your keyboard.

   b. Click the *Add* button to add the host to the list of *Allowed Hosts*.

   c. Repeat for each required host.

   Tip: If you later want to remove a host from the list, simply select the unwanted host in the list, then click the *Delete* button.

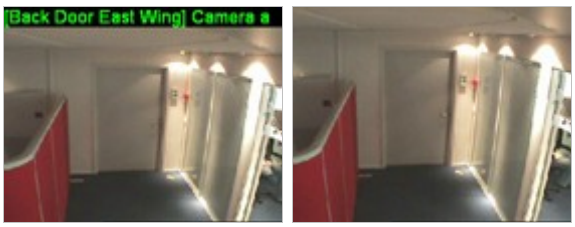
5. Now you are able to customize the behaviour of your *Matrix Monitor* application; you do this by adjusting settings in the window's *Run Mode* section.

   Tip: The *Matrix Monitor* application is pre-configured with typically required behaviour (settings marked by (default) in the following list). You do not need to adjust the settings listed in this step unless you want to customize the way your *Matrix Monitor* application should behave; consult your surveillance system administrator if in doubt.

   - ***Always On Top*:** If selected (default), this setting forces the *Matrix Monitor* window on top of other windows. This setting can subsequently be changed from a menu accessible by right-clicking inside the *Matrix Monitor* window.

   - ***Auto Accept All Commands*:** If selected (default), this setting will make your *Matrix Monitor* application automatically accept all commands received from allowed hosts (provided the commands are accompanied by the correct password). If this setting is not used, a dialog in the *Matrix Monitor* window will prompt you to accept each received command.

   - ***Display Camera Info*:** If selected (default), this setting will show camera information in the *Matrix Monitor* window. This allows camera names or camera IP addresses to be displayed, even if the *Matrix Monitor* window is running in full screen mode.

   The same image with and without camera information

- ***Keep Video Aspect Ratio*:** If selected (default), this setting will keep the original aspect ratio of images when the *Matrix Monitor* window is resized. If this setting is not used, images will be stretched to fill the available space.

The same image with (left) and without (right) original aspect ratio. Note how keeping the original aspect ratio often leads to black bars around the images.

- ***Reconnect On Startup*:** If selected (default), the *Matrix Monitor* will automatically attempt to connect to the last connected camera when starting. If this setting is not used, no camera connection will be attempted at startup.

- ***Camera Layout*:** Lets you select whether the *Matrix Monitor* window should run in 1×1 or 2×2 mode.

  - In *1×1* mode, the *Matrix Monitor* window is capable of displaying image feeds from a single camera at a time.

  - In *2×2* mode (default), the *Matrix Monitor* window is capable of showing image feeds from up to four cameras at a time.

  If using 2×2 mode, the image feeds will be inserted in top-left-to-bottom-right order, according to a first-in-first-out principle: Image feeds will remain in the position in which they were loaded; when all four positions are used, any new image feeds will replace the oldest image feeds.

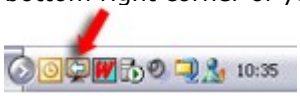
  If you select *Insert Camera On Top*, new image feeds will always be displayed in the top left position while any previously received image feeds will be shifted one position forward and eventually be "pushed out:"

- ***Startup Mode*:** Lets you select how the *Matrix Monitor* window should open when starting.

  - With *Full Screen*, the *Matrix Monitor* window will open in full screen mode, i.e. completely maximized, without any title bar, etc.

  - With *Window*, the *Matrix Monitor* window will open in regular mode, i.e. as a scalable window with a title bar, etc.

- With *Hidden*, the *Matrix Monitor* window will load in hidden mode, in which you will not see the window until there are images to display. You will, however, still be able to access the window by clicking the *Milestone XProtect Matrix* icon in Windows' notification area (also known as the system tray; typically located in the bottom right corner of your screen):



Example only; your notification area may have different content

Depending on your *On Connect* settings (see the following), a hidden *Matrix Monitor* window can automatically be restored to previous size when a connect command is received.

- ***On Connect*:** Lets you determine how the *Matrix Monitor* window should react when a connect command is received.
  - *Show Alert*: If selected, this setting will show a small alert box in the bottom right corner of your screen when a connect command is received. The alert box will close automatically after 10 seconds.
  - *Show Window*: If selected, this setting will automatically restore a *Matrix Monitor* window in hidden mode to previous size when a connect command is received.
- ***On Disconnect*:** Lets you determine how the Matrix *Monitor* window should react when a disconnect command is received.
  - *Show Alert*: If selected, this setting will show a small alert box in the bottom right corner of your screen when a disconnect command is received. The alert box will close automatically after 10 seconds.
  - *Hide Window*: If selected, this setting will automatically send the *Matrix Monitor* window to hidden mode when a disconnect command is received. When the window is in hidden mode, you still be able to access it by clicking the Milestone XProtect *Matrix* icon in Windows' notification area (also known as the system tray).

6. When ready, click *OK*.

Changing the Configuration of a Running Matrix Monitor

To change the configuration of a running *Matrix Monitor* application, do the following:

1. Open the *Matrix Monitor* window.

   Right-click anywhere inside the *Matrix Monitor* window, and select *Config* from the menu that appears:

2. Specify the password required for communicating with your Matrix Monitor:

3. Click *OK*.

   This will open the *Matrix Monitor Configuration* window. Each of the window's settings is described in the previous section, *First Time Configuration*, on page 8.

4. Make the required changes, and click *OK* when ready.

Day-to-Day Use

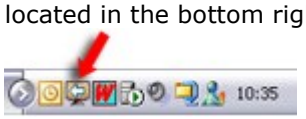
Opening the Matrix Monitor Window

Depending on configuration (see page 8), the *Matrix Monitor* window may appear on your screen automatically.

If the *Matrix Monitor* application is not running, you can start it by double-clicking the *Matrix Monitor* shortcut on your desktop:

Alternatively, use Windows' *Start* menu, selecting *All Programs* > *Milestone XProtect Matrix Monitor* > *Milestone Matrix Monitor*.

You may also find that the *Matrix Monitor* application is running, but in hidden mode. When the Matrix Monitor application runs in hidden mode, you will not see the *Matrix Monitor* window until there are images to display. You will, however, still be able to access the window by double-clicking the *Matrix Monitor* icon in Windows' notification area (also known as the system tray; typically located in the bottom right corner of your screen):



Example only; your notification area may have different content

1×1 and 2×2 View

Depending on configuration (see page 8), your *Matrix Monitor* window will display either a 1×1 or a 2×2 view:

With 1×1, the *Matrix Monitor* window is capable of displaying image feeds from a single camera at a time.

With 2×2, the *Matrix Monitor* window is capable of showing image feeds from up to four cameras at a time.

If using 2×2, the image feeds will be inserted in top-left-to-bottom-right order, according to a first-in-first-out principle: Image feeds will remain in the position in which they were loaded; when all four positions are used, any new image feeds will replace the oldest image feeds.

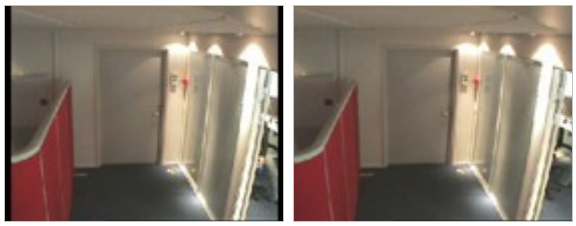
If you select *Insert Camera On Top*, new image feeds will always be displayed in the top left position while any previously received image feeds will be shifted one position forward and eventually be "pushed out:"

Camera Information

Depending on configuration (see page 8), your *Matrix Monitor* window may show camera information immediately above images:

Image Aspect Ratios

Depending on configuration (see page 8), images in your *Matrix Monitor* window may either be displayed with their original aspect ratio, or be stretched to fill the available space.



The same image with (left) and without (right) original aspect ratio. Note how keeping the original aspect ratio often leads to black bars around the images.

Toggling between Regular and Full Screen View

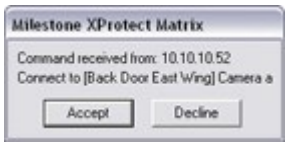
To quickly toggle between viewing the *Matrix Monitor* window in full screen or regular view, double-click anywhere inside the *Matrix Monitor* window.

Accepting Received Commands

As part of the image exchange between computers on the Matrix system, other computers (exactly which computers are defined as part of your *Matrix Monitor* application's configuration) are able to send commands to your Matrix Monitor. The commands typically tell your Matrix Monitor to connect to, or disconnect from, an image feed from a particular camera.

As part of the configuration (see page 8), your *Matrix Monitor* application may have been set up to automatically accept all received commands, in which case new image feeds will automatically be displayed in your *Matrix Monitor* window.

If your Matrix Monitor has not been set up to automatically accept all received commands, you will be prompted to accept all received commands before they are executed. When a command is received, a small dialog will be displayed in the bottom right corner of your screen.



The dialog will display the IP address or hostname of the sender as well

as information about the command itself.

To accept the command, click the *Accept* button. If you do not want to accept the command, click the *Decline* button.

Alerts upon Executed Commands

As part of the configuration (see page 8), your *Matrix Monitor* application may have been set up to automatically display alerts each time a command is executed.

When this is the case, a small alert box will be displayed in the bottom right corner of your screen upon each executed command. The alert box will inform you about the executed command.

The alert box will close automatically after 10 seconds. If required, you can close the alert box manually at any time.

Shortcut Menus

Two shortcut menus are available when working with the *Matrix Monitor* application:

Matrix Monitor Window Shortcut Menu

By right-clicking anywhere inside the *Matrix Monitor* window, you get access to a shortcut menu:

The shortcut menu has the following options:

- ***Full Screen*:** Lets you view the *Matrix Monitor* window in full screen mode, i.e. completely maximized, without any title bar, etc. To return to regular view, simply select *Full Screen* again.

  Tip: To quickly toggle between viewing the *Matrix Monitor* window in full screen or regular view, you can also simply double-click anywhere inside the *Matrix Monitor* window.

- ***Always On Top*:** Forces the *Matrix Monitor* window on top of other windows on your screen.

- ***Config*:** Lets you access the *Matrix Monitor Configuration* window (see page 8). Note that before the *Matrix Monitor Configuration* window opens, you will be prompted to specify the password required for communicating with your Matrix Monitor.

- ***Hide Window*:** Sends the *Matrix Monitor* window to hidden mode, in which you will not see the window until there are images to display.

  You will, however, still be able to access the window by clicking the *Milestone XProtect Matrix* icon in Windows' notification area (also known as the system tray; typically located in the bottom right corner of your screen):

Example only; your notification area may have different content

Notification Area Shortcut Menu

By right-clicking the *Milestone XProtect Matrix* icon in Windows' notification area, you get access to another shortcut menu:

The shortcut menu has the following options:

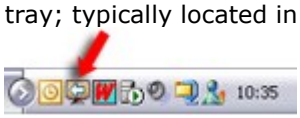
- ***Show Window*:** Restores the *Matrix Monitor* window in either regular or full screen view, depending on configuration.
- ***Config*:** Lets you access the *Matrix Monitor Configuration* window. Note that before the *Matrix Monitor Configuration* window opens, you will be prompted to specify the password required for communicating with your Matrix Monitor.
- ***Exit*:** Shuts down the *Matrix Monitor* application (see also the following). Note that before the application closes, you will be prompted to specify the password required for communicating with your Matrix Monitor.

Shutting Down

Closing the *Matrix Monitor* window by clicking the close button in the *Matrix Monitor* window's title bar will not in itself shut down *Matrix Monitor* application; it will merely send the window into hidden mode.

To shut down *Matrix Monitor* application, do the following:

1. Right-click the *Matrix Monitor* icon in Windows' notification area (also known as the system tray; typically located in the bottom right corner of your screen):

   Example only; your notification area may have different content

   Right-clicking the notification area's *Matrix Monitor* icon lets you access a shortcut menu:

2. From the menu, select *Exit.*

   Note that before the application closes, you will be prompted to specify the password required for communicating with your Matrix Monitor.

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